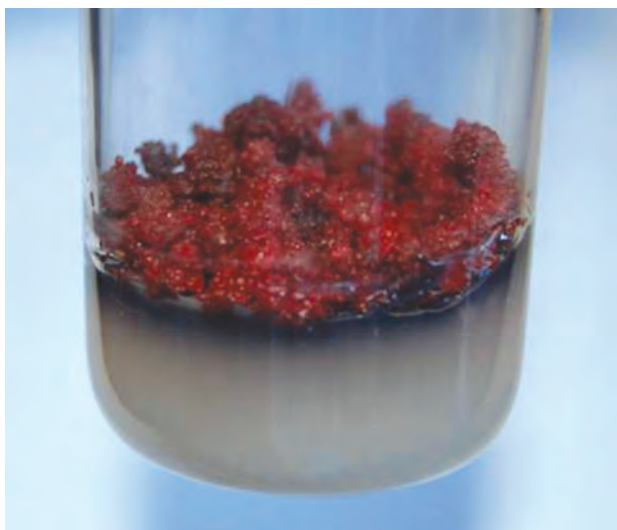


ECHIUM PLANTAGINEUM TISSUE CULTURE SOURCE OF SHIKONIN, A NAPHTHOQUINONE COMPOUND WITH A BROAD SPECTRUM OF THERAPEUTIC ACTION



General view of *Echiium plantagineum* L. tissue culture, the producer of shikonin

Areas of Application

The culture is used for obtaining shikonin, a red naphthoquinone pigment having antibacterial, antitumor, antiviral, anti-inflammatory, and wound healing action and preventing scars formation. As dye shikonin used in cosmetic, textile, and food industries

Specification

The high-yielding strain of *Echiium plantagineum* tissue culture contains 8% shikonin on dry weight basis. The cycle of culture growth is 14–20 days. The yield of dry shikonin biomass is 6,4–8.5 g/l

Stage of Development. Suggestion for Commercialization

IRL3, TRL3

Dry biomass of *Echiium plantagineum* tissue culture for production of extracts with shikonin provided upon request. Seeking partners for scaling up *Echiium plantagineum* biomass tissue culture and producing shikonin

Advantages

Echiium plantagineum tissue culture has no analogs in Ukraine. There are no sources for shikonin obtainment in Ukraine. As compared with other herbal wound-healing medicines, the shikonin-based drugs prevent scars formation. The cost of shikonin obtained in Ukraine is lower by 30% as compared with foreign analogs

IPR Protection

IPR2

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